

IN THE CLAIMS:

This listing of claims provided below will replace all prior versions and listings of claims in the application.

1. (Currently Amended) An inkjet ink comprising ~~at least~~ a pigment, a water-soluble solvent and water, the water-soluble solvent comprising:

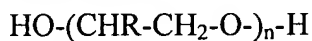
a first water-soluble solvent group comprising a ~~containing at least one kind of~~ water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ;

a second water-soluble solvent group comprising a ~~containing at least one kind of~~ water-soluble solvent having a solubility parameter which is at least 1 greater than a the solubility parameter SP_1 ~~of the at least one kind of water-soluble solvent represented by general formula (I)~~; and;

a third water-soluble solvent group comprising a ~~containing at least one kind of~~ water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ;

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represent a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

2. (Currently Amended) ~~An~~ The inkjet ink ~~according to~~ of claim 1, wherein the first water-soluble organic solvent group further ~~contains~~ comprises a water-soluble solvent other than the ~~at least one kind of~~ water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less

than 1.

3. (Currently Amended) ~~An~~ The inkjet ink according to of claim 1, wherein the pigment is self-dispersible in water.

4. (Currently Amended) ~~An~~ The inkjet ink according to of claim 3, further ~~containing~~ comprising a polymer anion or a polymer cation.

5. (Currently Amended) ~~An~~ The inkjet ink according to of claim 1, further comprising a polymer dispersant, wherein the pigment is dispersed by the polymer dispersant.

6. (Currently Amended) An inkjet ink comprising a pigment, a water-soluble solvent and water, the water-soluble solvent comprising:

a first water-soluble solvent group comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ;

a second water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a the solubility parameter SP_1 and;

a third water-soluble solvent group comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ;

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.5$$

Equation (2)

$$0.25 \leq W_3/W_1 < 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represent a content (% by mass) of

the third water-soluble solvent group contained in the inkjet ink,

wherein the first water-soluble organic solvent group further comprises a water-soluble solvent other than the water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1, and

~~An inkjet ink according to claim 2,~~ wherein an absolute value of a ζ potential of the inkjet ink is in the range of 3 mV to 60 mV.

7. (Currently Amended) ~~An~~ The inkjet ink ~~according to~~ of claim 1, wherein a the surface tension of the inkjet ink is at least 20 Nm/m and less than 45 mN/m.

8. (Currently Amended) ~~An~~ The inkjet ink according to claim 1, wherein a the viscosity of the inkjet ink is at least 1.2 mPa•s and less than 6.0 mPa•s.

9. (Currently Amended) An inkjet recording method of printing on a recording medium, the recording medium comprising ~~containing~~ a multivalent metal salt, an organic cationic substance or an organic anionic substance, using an inkjet ink ~~containing at least~~ comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent ~~contains~~ comprises,

a first water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ,

a second water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP_1 ~~of the at least one kind of water-soluble solvent represented by general formula (I), and~~

a third water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ; and

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.0 \text{ } \underline{1.5}$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

10. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 9, wherein the first water-soluble organic solvent group further ~~contains~~ comprises a water-soluble solvent other than the ~~at least one kind of~~ water-soluble solvent represented by the general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

11. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 9, wherein a the number of particles having particle diameters of 5 μm or larger contained in the inkjet ink ~~which is added dropwise to a surface of the recording medium is~~ 1 x 10²/μl or more, and wherein the inkjet ink is added dropwise to a surface of the recording medium.

12. (Currently Amended) An inkjet recording method, wherein ~~in which~~ a liquid composition ~~containing~~ comprising a multivalent metal salt, an organic cationic substance or an organic anionic substance is imparted to a surface of a recording medium and, thereafter, printing is conducted on a region of the surface of the recording medium to which the liquid composition has been imparted, using an inkjet ink ~~containing at least~~ comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent ~~contains~~ comprises

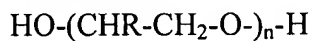
a first water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ;

a second water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble

solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP_1 of the at least one kind of water-soluble solvent represented by general formula (I); and;

a third water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ; and wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq 1.0 \text{ } \underline{1.5}$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represent a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

13. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 12, wherein the first water-soluble organic solvent group further ~~contains~~ comprises a water-soluble solvent other than the ~~at least one kind of~~ water-soluble solvent represented by the general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

14. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 12, wherein a the number of particles having particle diameters of 5 μm or larger in a mixed solution of the inkjet ink and the liquid composition is $1.0 \times 10^3/\mu l$ or more.

15. (Currently Amended) An inkjet recording method of printing on a recording medium by a thermal inkjet system or a piezo-inkjet system using an inkjet ink ~~containing at least~~ comprising a pigment, a water-soluble solvent and water, wherein:

the water-soluble solvent ~~contains~~ comprises

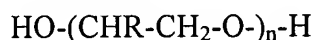
a first water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent represented by the following general formula (I) and having a solubility parameter SP_1 ,

a second water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent having a solubility parameter which is at least 1 greater than a solubility parameter SP_1 ~~of the at least one kind of water-soluble solvent represented by general formula (I)~~, and

a third water-soluble solvent group ~~containing at least one kind of~~ comprising a water-soluble solvent having a solubility parameter which is at least 1 less than the solubility parameter SP_1 ; and

wherein respective contents (% by mass) of the water-soluble solvent groups contained in the inkjet ink satisfy the following equation (1) and the following equation (2):

General formula (I)



Equation (1)

$$W_2/W_1 \geq \underline{1.0} \ \underline{1.5}$$

Equation (2)

$$0.25 \leq W_3/W_1 \leq 0.75$$

wherein in general formula (I), equation (1) and equation (2), n represents an integer of 3 to 6; R represents hydrogen or a methyl group; W_1 represents a content (% by mass) of the first water-soluble solvent group contained in the inkjet ink; W_2 represents a content (% by mass) of the second water-soluble solvent group contained in the inkjet ink; and W_3 represents a content (% by mass) of the third water-soluble solvent group contained in the inkjet ink.

16. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 15, wherein the first water-soluble organic solvent group ~~contains~~ comprises a water-soluble solvent other than the at least one kind of water-soluble solvent represented by general formula (I), having a solubility parameter such that an absolute value of a difference thereof from the solubility parameter SP_1 is less than 1.

17. (Currently Amended) ~~An~~ The inkjet recording method ~~according to~~ of claim 15, wherein ~~an~~ the amount of the inkjet ink to be imparted to a surface of the recording medium is 25 ng

or less per one droplet.

18. (New) The inkjet ink of claim 1, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

19. (New) The inkjet recording method of claim 9, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

20. (New) The inkjet recording method of claim 12, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.

21. (New) The inkjet recording method of claim 15, wherein the water-soluble solvent represented by the general formula (I) is selected from a group consisting of tetraethylene glycol, pentaethylene glycol, hexaethylene glycol, and tripropylene glycol.